

Contact Details: P. C. ABHILASH

Assistant Professor &
Principal Investigator (CSIR, DST, UGC & INSA Projects)
Institute of Environment & Sustainable Development
Banaras Hindu University, Varanasi 221005, UP, India
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Academic Qualifications:

- **MSc** Environment Management (2003) with Distinction & University First Rank, Mahatma Gandhi University, Kerala
- **UGC-NET-JRF** (2003) in Environmental Science , University Grants Commission, Govt. of India
- **PhD** in Environmental Science (2009) CSIR-National Botanical Research Institute & University of Lucknow, UP, India

Research Areas: Sustainability Science; Pesticide Pollution; Plant-microbe-pollutant interactions under changing climate; Rhizoremediation of POPs; Nanoparticles in soil system; Restoration ecology; Biomass/biofuel production from marginal & degraded lands; Soil carbon flux & Microbial response to climate change.

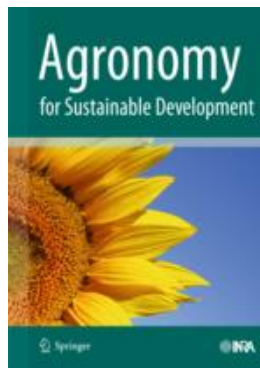
Awards/Recognitions:

- Visiting Professorship, São Paulo State University/Campus Sorocaba, Brazil, 2014.
- Visiting Fellowship, School of Biological Sciences, University of Hong Kong, Hong Kong, 2014.
- Associate, National Academy of Agricultural Sciences (NAAS), New Delhi, 2014-
- INSA Medal for Young Scientist, Indian National Science Academy (INSA), New Delhi, 2013.
- HIYOSHI Young Leaf Award, Hiyoshi Corporation, Japan, 2013
- NASI-Platinum Jubilee Young Scientist Award, National Academy of Sciences India (NASI), Allahabad, 2010.
- Elected Member (MNASc), National Academy of Sciences India (NASI), Allahabad, 2010-
- Young Scientist Award, Science & Engineering Research Board, Govt. of India, 2012-2015.
- Member, Commission on Ecosystem Management, IUCN, Switzerland, 2011-
- Fellow, International Society for Tropical Ecology, BHU, Varanasi 2013.
- Fellow, Society for Plant Research, India, 2013.
- Affiliate Member, International Union for Pure & Applied Chemistry, USA, 2012-
- Travel Award, DST-SERB to attend 10th Phytotech conference at State University of New York USA, Oct 1-4, 2013.
- Travel Award, Dow Agrosiences, USA to attend York Pesticide-2013 at York University, UK, Sept 2-4, 2013.
- Travel Award, University of Oxford, to attend 'Planet Under Pressure-2012', London, 2012.
- CSIR-Nehru Science Postdoctoral Fellowship, Council of Scientific & Industrial Research, New Delhi, 2010.
- CSIR-Research Associateship, Council of Scientific & Industrial Research, New Delhi, 2010.
- UGC-Dr DS Kothari Postdoctoral Fellowship, University Grants Commission, New Delhi, 2010.
- UGC-NET-JRF-SRF, University Grants Commission, New Delhi, 2004-2009.
- University First Rank in M.Sc. Environment Management, Mahatma Gandhi University, Kerala, India.

Editorial Tasks:



Editorial Board/ Handling Editor
Impact Factor: 5.078



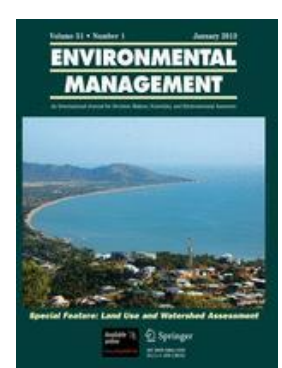
Associate Editor
Impact Factor: 2.841



Editorial Board Member
Impact Factor: 3.411



Editorial Board Member
Impact Factor: 2.492



Editorial Board/ Handling Editor
Impact Factor: 1.648

- **Editorial Board/Handling Editor**, *Scientific Reports* [IF: 5.078], Nature Publishing Group, 2014-
- **Academic Editor**, *PLOS One* [3.534], PLOS Publishers, 2014-
- **Associate Editor**, *Biomass and Biofuels*(*Frontiers in Energy*), Frontiers Publishers, 2014-
- **Editorial Board/Contributing Editor**, *Restoration Ecology* [IF: 1.991], Wiley, 2014-
- **Editorial Board/Handling Editor**, *Environmental Management* [IF: 1.648], Springer, 2013-
- **Editorial Board**, *Biomass and Bioenergy* [IF: 3.411], Elsevier, 2012-
- **Editorial Board**, *Biodegradation* [IF: 2.492], Springer, 2012-
- **Associate Editor**, *Agronomy for Sustainable Development* [IF: 2.841], Springer, 2011-



Foreign Visit:

UK (London, March 2012); **UK** (Manchester & York, Sep 2013); **USA** (New York, Syracuse & Niagra, Oct 2013).

Research Experience:

- **Assistant Professor**, Institute of Environment & Sustainable Development (IESD), Banaras Hindu University, Varanasi, 3rd March 2011- till date
- **CSIR-Nehru Science Postdoctoral Fellow**, Agronomy & Soil Science Division, Central Institute of Medicinal & Aromatic Plants (CSIR-CIMAP), Lucknow, 25th November 2010 to 1st March 2011.
- **UGC-Dr DS Kothari Postdoctoral Fellow**, Babasaheb Bhimrao Ambedkar (Central) University, Lucknow, 1st January 2010 to 24th November 2010.
- **UGC-NET-SRF**, Eco-Auditing Laboratory, National Botanical Research Institute (CSIR-NBRI), Lucknow, 18th October 2006 to 31st October 2009.
- **UGC-NET-JRF**, Eco-Auditing Laboratory, National Botanical Research Institute (CSIR-NBRI), Lucknow, 18th October 2004 to 17th October 2006.
- **MoEF-JRF**, Environmental Resources Research Centre, Trivandrum, 20th November 2003 to 9th October 2004

Curricula/Syllabus Designed:

Research Methodology (Major)
 Science Communication(Minor)
 Environmental Toxicology (Major)
 Energy Resource Management (Major)
 Soil Conservation and Management (Major)
 Environmental Microbiology (Major)
 Advanced Instrumentation (Major)

Subjects Taught:

ESD 101 Concept & Practices of Sustainability (Major)
 ESD 105 Research Methodology (Major)
 ESD 110M Science Communication (Minor)
 ESD 205 Environmental Toxicology (Major)
 ESD 206 Energy Resource Management (Major)
 ESD 212 Soil Conservation and Management (Major)
 ESD 220 Advances in Sustainability Science (Major)

Research Grants Received/Under Consideration (as PI/Co-PI):

1. Effect of changing climate on plant-rhizospheric chemical interactions and bioremediation of organic pollutants. **PI**, SERB, DST, Govt of India, **Rs. 25** lakhs.
2. Enhancing rhizodegradation of HCH by suitable agronomic packages. **PI**, UGC-Major Research Project Scheme, University Grants Commission, **Rs. 9.85** lakhs
3. Microbial control of soil respiration and its response to increasing atmospheric temperature and CO₂ level. **PI**, CSIR, **Rs.30.00** lakhs.
4. Effect of nanoparticles (NPs) on physical, chemical and biological entities of the soil system. **PI**, INSA, **Rs. 15** lakhs.
5. Development of novel technologies for climate resilient agriculture through microbial inoculants. Proposal submitted under ICAR Niche Area of Excellence Programme. **Co-PI** (PI: Prof HB Singh, IASc) ICAR, **Rs. 1034.4** lakhs

Consultancy Works:

1. Preparing a state-of-art document on the 'Analysis of pesticide use and latest trends in crop health management in different states including the use of biopesticides, pesticides and botanicals' for the State Planning Board, Govt. of Kerala. **Chief Consultant, Rs. 3** lakhs.

Research Guidance: Ph D: **4** (ongoing); M Phil: **2** (Completed).

Summer Research Fellowship of Joint Science Academies (Indian Academy of Sciences (IASc), Bangalore; Indian National Science Academy (INSA), New Delhi & National Academy of Sciences, India (NASI), Allahabad).

1. **Ms. Nupur Ohja**, MSc. Microbiology (II Sem), Vellore Institute of Technology, Tamil Nadu. Isolation of Rhizospheric Bacteria and Their Evaluation For Plant Growth Promoting Activity (June-July 2014).

M.Phil: Degree Awarded (2)

1. **Ms. Manasi Baxi** (2013). Application of Nanotechnology in Sustainable Agriculture.
2. **Mr. Sheikh Adil Edrisi** (2013) Sustainable Biofuel Production from Marginal and Degraded Lands: An Ecological and Socio-economic Approach

Ph.D: Ongoing (4)

1. **Mr. Rama Kant Dubey**, DST-JRF. Microbial Control of Soil Respiration and its Response to Warming Climate. 2012-
2. **Mr. Vishal Tripathi**, UGC-PF. Harnessing Plant-Microbe Interactions for the Bioremediation of Pesticides under Field and Warming Climatic Conditions. 2012-
3. **Ms. Mansi Bakshi**, UGC-JRF. Effect of Selected Nanoparticles on the Chemical, Physical and Biological Entities of the Soil System. 2013-
4. **Mr. Sheikh Adil Edrisi**. Sustainability Analysis of Biomass & Biofuel Production from Marginal and Degraded Lands of India. 2013-

PhD thesis evaluated/ Synopsis evaluated for Ph D registration/Viva-voce conducted:

1. Ms. Vandana Singh, Academy of Scientific & Industrial Research (CSIR-AcSIR), New Delhi. **Bioremediation of endosulfan contaminated soils by using selected plant species and rhizospheric microbial strains**. (Thesis evaluator & External Expert for Viva-voce), 18th July 2014.
2. Ms. Marisha Sharma, Dept. of Biotechnology, Banasthali University, Rajasthan. **Role of salicylic acid in regulating drought induced responses in wheat and soybean**. (Synopsis evaluated for PhD registration in Biotechnology), 17th November, 2014

Professional/Academic Involvements:

- **Member, Organizing Committee**, 4th Global Summit on Toxicology, 24-26 August, 2015, Philadelphia, USA
- **Member, Organizing Committee**, International Conference on Environment & Ecology, 2-4 March, 2015, Kolkata
- **Member, Advisory Committee**, INDO-GLOBAL AGRI EXPO & SUMMIT 2015, 2-4 October, 2015, Hyderabad
- **Member, Judging Committee** for the National Children's Science Congress, Varanasi, 14th November, 2014
- **Invited Nominator** for the Blue Planet Prize-2015 of the Asahi Glass Foundation, Japan
- **Reviewer**, Fifth Assessment Report of Working Group-II (2014), IPCC, Geneva, Switzerland
- **Expert Reviewer**, Fifth Assessment Report of Working Group-II (2014) for the Govt. of Netherlands
- **Expert Reviewer** for research projects evaluation, National Centre of Science & Technology, Republic of Kazakhstan
- **Expert Reviewer for Project Funding**, Ministry of Earth Science (MoES), Govt. of India
- **Member, Judging Committee** for the evaluation of Student's Posters and Platform Presentation, 10th International Phytotechnologies Conference, State University of New York, Syracuse, USA, 1-4 October, 2013.
- **Member, International Scientific Committee**, AgroEnviron-2014, held at Oscar Niemeyer Cultural Centre, Brazil, 3-7 August, 2014.
- **Member, Organizing Committee**, International Workshop on 'Green initiatives in Energy, Environment & Health' organised by Green Chemistry Centre of York University, UK; TERI; GB University, Noida and Green Chemistry Networks and sponsored by **Royal Society of Chemistry London** (North India), 2-3 December, 2013.
- **Member, National Advisory Committee**, National Conference on 'Heavy Metals in Environment-2013', organised by School of Environmental Science, Mahatma Gandhi University, Kerala, 28-30 November 2013.
- **Member, Organizing Committee**, The National Academy of Sciences (India) 82nd Annual Session and National Symposium on 'Nano-Science and Technology for Mankind', organised by Banaras Hindu University, Varanasi, 29 November-1st December, 2012.
- **Approved Guide for the Science Academies'** (Indian Academy of Science, Bangalore; Indian National Science Academy, New Delhi and National Academy of Science, Allahabad) **Summer Research Fellowship Program**.

- **Consultant, Curriculum development**, BSc (Hons) in Biological Sciences, Great Zimbabwe University, Zimbabwe
- **Subject Expert**, DRC in Environmental Science, Integral University, Lucknow, 2012
- **External Examiner**, Academy of Scientific & Industrial Research (AcSIR), New Delhi; Mahatma Gandhi University, Kerala, VBS Purvanchal University, Jaunpur; Kannur University, Kerala; Integral University, Lucknow
- **Affiliate**, Federation of European Microbiological Societies (FEMS), Delft, The Netherlands, 2012-
- **Senior Member**, Asia-Pacific Chemical, Biological & Environmental Engineering Society, Hong-Kong, 2012-
- **Member**, DIVERSITA in Western Pacific & Asia (DIWAPA), Kyoto University, Japan , 2008-
- **Member**, South Asian Network for Development & Environmental Economics (SANDEE), Kathmandu, Nepal , 2011-
- **Life Member**, Society for Plant Research, India, 2013-
- **Life Member**, Indian Meteorological Society, 2011-
- **Life Member**, Biotech Research Society, India, 2010-
- **Life Member**, Indian Society of Plant Genetic Resources (ISPGR), NBPGR, New Delhi, 2004-
- **Life Member**, International Society of Environmental Botanists (ISEB), CSIR-NBRI, Lucknow, 2004-
- **Member**, International Society for Tropical Ecology (ISTE), Banaras Hindu University, Varanasi, India, 2005-
- **Member**, Indian Society for Soil Science (ISSS), Indian Agriculture Research Institute, New Delhi, 2009-
- **Advisory person** for the management of exotic weed *Limncharis flava* (L.) Bucheanu, for the Global Invasive Species Database, Invasive Species Specialist Group (ISSG) of Species Survival Commission (SSC) of IUCN.

Subject Expert Reviewer:



Biomass & Bioenergy; Chemosphere; Ecological Engineering; Ecotoxicology & Environmental Safety; Food Biosciences; Industrial Crops & Products; International Biodeterioration & Biodegradation; Journal of Hazardous Materials; Journal of Environment Management; Renewable & Sustainable Energy Reviews; Resource Conservation & Recycling; Talanta.



Agronomy for Sustainable Development; Applied Microbiology & Biotechnology; AMBIO; Biodegradation; Biodiversity & Conservation; Ecotoxicology; Environmental Chemistry Letters; Environmental Geochemistry & Health; International Journal of Environmental Science & Technology; Plant & Soil; Plant Cell Reports & Sustainable Agriculture Reviews



CLEAN- Soil, Air, Water; Plant Biology



International Journal of Green Energy; International Journal of Phytoremediation



Environmental Science: Processes & Impacts; RSC Advances

List of Publications: Total citations: **1022**; *h*-Index: **19**; Total Impact Factor of published papers: **144.393**

(A) Book(s) Authored/Editing: (1)

1. **Abhilash, P.C., Singh, H.B.** (Eds.) "*Biotechnological Applications for Environmental Protection*" Springer, 2014

(B) Research/Opinion/Review Articles Published in International Peer Reviewed Journals: (43)



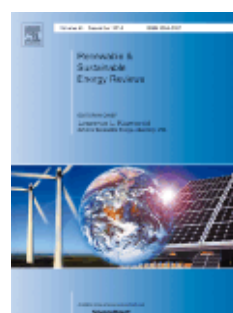
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1. de Oliveira, J.L., Campos, E.V. R., Bakshi, M., **Abhilash, P.C.**, Fraceto, L.F. Application of nanotechnology for the encapsulation of botanical insecticides for sustainable agriculture: Prospects and promises. *Biotechnology Advances* (2014) <http://dx.doi.org/10.1016/j.biotechadv.2014.10.010> [IF: 8.905]
2. Edrisi, S.A., **Abhilash, P.C.***. Exploring marginal and degraded lands for biomass production in India. *Renewable and Sustainable Energy Reviews* [IF: 5.51]. Accepted.
3. Edrisi, S.A., Dubey, R.K., Tripathi, V., Srivastava, P., Jamil, S., Singh, H.B., Singh, N., **Abhilash, P.C.***. *Jatropha curcas* L.: A crucified plant waiting for resurgence. *Renewable and Sustainable Energy Reviews* 41 (2015) 855-862. [IF: 5.51].
4. **Abhilash, P.C.*** Towards the designing of low carbon societies for sustainable landscapes. *Journal of Cleaner Production* (2014). 10.1016/j.jclepro.2014.09.057 [IF: 3.590].
5. Tripathi, V., Dubey, R.K., Singh, N., Singh, H.B., **Abhilash, P.C.***. Is *Vigna radiata* is suitable for cropping in lindane contaminated soil? *Ecological Engineering* 73 (2014) 219-223 [IF: 3.041].
6. Dubey, R.K., Tripathi, V., Singh, N., **Abhilash, P.C.***. Phytoextraction of lindane by *Spinacia oleracea* L.. *Ecotoxicology and Environmental Safety* 109 (2014) 22-26 [IF: 2.482]
7. Tripathi, V., Dueby, R.K., Edrisi, S.A., Narain, K., Singh, H.B., Singh, N., **Abhilash, P.C.***. Towards the ecological profiling of a pesticide contaminated site for remediation and management. *Ecological Engineering* 71 (2014) 318-325 [IF: 3.041].
8. **Abhilash, P.C.***, Dubey, R.K. Integrating aboveground-belowground responses to climate change. *Current Science* 106 (2014) 1637-1638 [IF: 0.833].
9. Bakshi, M., Singh, H.B., **Abhilash, P.C.***. Unseen impact of nanoparticles: More or less? *Current Science* 106 (2014) 350-352 [IF: 0.833]
10. **Abhilash, P.C.***, Singh, B., Srivastava, P., Schaeffer, A., Singh, N. Remediation of lindane by *Jatropha curcas* L: Utilization of multipurpose species for rhizoremediation. *Biomass & Bioenergy* 51 (2013) 189-193 [IF: 3.411]
11. **Abhilash, P.C.***, Dubey, R.K., Tripathi, V., Srivastava, P., Verma, J.P., Singh, H.B. Remediation and management of POPs-contaminated soils in a warming climate: Challenges and perspectives. *Environmental Science and Pollution Research* 20 (2013) 5879-85 [IF: 2.757]
12. **Abhilash, P.C.***, Dubey, R.K., Tripathi, V., Srivastava, P., Verma, J.P., Singh, H.B. Adaptive soil management. *Current Science* 104 (2013) 1275-76. [IF: 0.833]
13. Singh, A., Jain, A., Sarma B.K., **Abhilash, P.C.**, Singh, HB. Solid waste management of temple floral offerings by vermicomposting using *Eisenia fetida*. *Waste Management* 33 (2013) 113-1118. [IF: 3.157].
14. Srivastava, S., Verma, P.C., Chaudhry, V., Singh, N., **Abhilash, P.C.**, Kumar, K.V., Sharma, N., Singh, N. Influence of inoculation of arsenic-resistant *Staphylococcus arlettae* on growth and arsenic uptake in *Brassica juncea* (L.) Czern. Var R46. *Journal of Hazardous Materials* 262 (2013) 1039-1047. [IF: 4.331]
15. **Abhilash, P.C.**, Powell, J., Singh, H.B., Singh, B. Plant-microbe interactions: Novel applications for exploitation in multipurpose remediation technologies. *Trends in Biotechnology* 30 (2012) 416-420. [IF: 10.04]
16. Srivastava, M., Gupta, S.K., **Abhilash, P.C.***, Singh, N. Structure prediction and binding sites analysis of curcin protein of *Jatropha curcas* using computational approaches. *Journal of Molecular Modelling* 18(2012) 2971-2979.[IF: 1.867]
17. Narain, K., Bhat, M.M., **Abhilash, P.C.**, Yunus, M. Impact of distillery effluent on seedling growth and pigment concentration of *Cicer arietinum* L. *Journal of Environmental Research & Development* 6 (2012) 601-608.
18. **Abhilash, P.C.***, Srivastava, S., Srivastava, P., Jafri, A., Singh, N. Influence of rhizospheric microbial inoculation and tolerant plant species on the rhizoremediation of lindane. *Environmental & Experimental Botany* 74 (2011) 127-130. [IF: 3.003]
19. **Abhilash, P.C.***, Srivastava, S., Singh, N. Comparative bioremediation potential of four rhizospheric microbial species against lindane. *Chemosphere* 82 (2011)56-63. [IF: 3.499]
20. Srivastava, M., **Abhilash, P.C.**, Singh, N. Remediation of Lindane using engineered nanoparticles. *Journal of Biomedical Nanotechnology* 7 (2011) 173-175. [IF: 7.578]
21. Singh, J., **Abhilash, P.C.**, Singh, H.B., Singh, R.P., Singh, D.P. Genetically engineered bacteria: an emerging tool for environmental remediation and future research perspectives. *Gene* 480 (2011) 1-9. [IF: 2.082]

22. Vijgen, J., **Abhilash, P.C.**, Li, Y.F., Lal, R., Forter, M., Torres, J., Singh., Yunus, M., Tian, C., Schäffer, A., Weber, R. HCH isomers as new Stockholm Convention POPs – A global perspectives on the management of Lindane and its waste isomers. *Environmental Science and Pollution Research* 18 (2011) 152-162. [IF: 2.757]
23. **Abhilash, P.C.*.**, Yunus, M. Can we use biomass produced from phytoremediation? *Biomass & Bioenergy* 35 (2011) 1371-1372. [IF: 3.411]
24. **Abhilash, P.C.**, Srivastava, P., Jamil, S., Singh, N. Revisited *Jatropha curcas* L. as an oil plant of multiple benefits: critical research needs and prospects for the future. *Environmental Science and Pollution Research* 18 (2011)127-131. [IF: 2.757]
25. Abhirosh, C., Sherin, V., Thomas, A.P., Hatha, A.A.M., **Abhilash, P.C.** Potential Exposure Risk Associated With the High Prevalence and Survival of Indicator and Pathogenic Bacteria in the Sediment of Vembanadu Lake, India. *Water Quality, Exposure & Health* 2 (2010) 105-113.
26. **Abhilash, P.C.*.**, Singh, N. Effect of growing *Sesamum indicum* L. on enhanced dissipation of lindane (1, 2, 3, 4, 5, 6-hexachlorocyclohexane) from soil. *International Journal of Phytoremediation*. 12 (2010) 1-14. [IF: 1.466]
27. **Abhilash, P.C.**, Singh, N. *Withania somnifera* Dunal-mediated dissipation of lindane from simulated soils: Implications for phytoremediation of contaminated soils. *Journal of Soils Sediments* 10 (2010) 272-282. [IF: 2.107]
28. **Abhilash, P.C.**, Jamil, S., Singh, N. Transgenic plants for enhanced biodegradation of organic xenobiotics. *Biotechnology Advances*. 27 (2009) 474-488. [IF: 8.905]
29. **Abhilash, P.C.*.**, Pandey, V.C., Srivastava, P., Rakesh, P.S., Chandran, S., Singh, N., Thomas, A.P. Phytofiltration of cadmium from water by *Limnocharis flava* (L.) Buchenau grown in free-floating culture system. *Journal of Hazardous Materials*. 170 (2009) 791-797. [IF: 4.331]
30. **Abhilash, P.C.**, Singh, N. Pesticide use and application: An Indian scenario. *Journal of Hazardous Materials*. 165 (2009) 1-12. [IF: 4.331]
31. Pandey, V.C., **Abhilash, P.C.**, Upadhyaya, R.N., Tewari, D.D. Application of fly ash on the growth performance and translocation of toxic heavy metals within *Cajanus cajan* L.: Implication for safe utilization of fly ash for agricultural production. *Journal of Hazardous Materials* 166 (2009) 255-259 . [IF: 4.331]
32. Jamil, S., **Abhilash, P.C.**, Singh, N., Sharma, P.N. *Jatropha curcas*: A potential crop for phytoremediation of coal fly ash. *Journal of Hazardous Materials*. 172 (2009) 269-275. [IF: 4.331]
33. **Abhilash, P.C.**, V., Singh, Singh, N. Simplified determination of combined residues of Lindane and other HCH isomers in vegetables, fruits, wheat, pulses and medicinal plants by matrix solid phase dispersion (MSPD) followed by GC-ECD. *Food Chemistry*.113 (2009) 267-271. [IF: 3. 259]
34. **Abhilash, P.C.**, Singh, N. Seasonal variation of HCH isomers in open soil and plant rhizospheric soil system of a contaminated environment. *Environmental Science and Pollution Research* (2009) 16 (2009) 727-740. [IF: 2.757]
35. Pandey, V.C., **Abhilash, P.C.**, Singh, N. The Indian perspectives of utilizing fly ash in phytoremediation, phytomanagement and biomass production. *Journal of Environmental Management* 90 (2009) 2943-2958. [IF: 3.188]
36. Jamil, S., **Abhilash, P.C.**, Singh, A., Singh, N. Behl, H.M. Flyash trapping and metal accumulating capacity of plants: Implication for green belt around thermal power plants. *Landscape and Urban Planning* 92 (2009)136-147. [IF: 2.606]
37. **Abhilash, P.C.**, Singh, N. Distribution of hexachlorocyclohexane isomers in soil samples from a small scale industrial area of Lucknow, North India, associated with lindane production. *Chemosphere*. 73 (2008) 1011-1015. [IF: 3.499]
38. **Abhilash, P.C.**, Jamil, S., Singh., V., Singh, N., Srivastava, S.C. Occurrence and distribution of hexachlorocyclohexane isomers in vegetation samples from a contaminated area. *Chemosphere* 72 (2008) 79-86. [IF: 3.499]
39. **Abhilash, P.C.*.**, Singh, N. Multiple residue extraction for organochlorine pesticides in medicinal plants. *Bulletin of Environmental Contamination and Toxicology*. 81 (2008) 604-607. [IF: 1.216]
40. **Abhilash, P.C.**, Singh, N., Influence of the application of sugarcane bagasse on Lindane mobility through soil columns: Implications for biotreatment. *Bioresource Technology*. 99 (2008) 8961-8966. [IF: 5.039]
41. **Abhilash, P.C.*.**, Singh, N., Syllas, V.P., Kumar, B. A., Mathew, J.C., Satheesh, R., Thomas, A.P. Eco-distribution mapping of invasive weed *Limnocharis flava* (L.) Buchenau using Geographical Information System: implications for containment and integrated weed management for ecosystem conservation. *Taiwania* 53 (2008) 30-41.
42. **Abhilash, P.C.*.** Bio-diversity prospecting: An innovative approach of using biological resources for sustainable development. *Vegetos* 20 (2007) 23-25. [IF: 0.042]

43. **Abhilash, P.C.**, Jamil, S., Singh, N. Matrix solid-phase dispersion extraction versus solid-phase extraction in the analysis of combined residues of hexachlorocyclohexane isomers in plant matrices. *Journal of Chromatography A* 1176 (2007) 43-47. [IF: 4.258]

(C) Popular Articles:

1. **Abhilash, P.C.**, Phytoremediation: An innovative technique for ecosystem cleanup. *Our Earth* 4(3), 2007, 7-12.
2. **Abhilash, P.C.**, Singh, N., Remediation of hexachlorocyclohexane (HCH) contaminated soils. *ENVIS-NBRI Newsletter (Pesticides)* 5(2), 2009, 2-5

(D) Monograph Prepared:

1. Compiled the species profile of *Limnocharis flava* (L.) Buchenau for Invasive Species Specialist Group (ISSG) of Species Survival Commission (SSC) of IUCN, Auckland University Campus, New Zealand.

(E) Book Chapters Published/Accepted/ Under review:

1. **Abhilash, P.C.**, Singh, H.B. Biotechnological Applications for Environmental Protection: An Overview. In: **Abhilash, P.C.**, Singh, H.B (Eds) *Biotechnological Applications for Environmental Protection*, Springer
2. Dubey, R.K., **Abhilash, P.C.**, Singh, H.B. Microbial regulation of soil carbon. In **Rakshit, A** (Ed), Springer
3. Tripathi, V., **Abhilash, P.C.**, Singh, H.B. Bioremediation of Chlorinated Pesticides. In: **Ramchandra, E.V** (Ed) CRC Press
4. Jamil, S., **Abhilash, P.C.**, Singh, N. Arbuscular Mycorrhizal Fungi and Phytoremediation of Heavy Metal Polluted Soil. In: **Abhilash, P.C.**, Singh, H.B (Eds) *Biotechnological Applications for Environmental Protection*, Springer
5. Rakesh, P.S., **Abhilash, P.C.** Anaerobic Digestion: A Technology Option for Municipal Solid Waste Management. In: **Patro, L.R.** (Ed), *Biotechnology-Its Growing Dimensions*, Discovery Publishing Ltd, New Delhi.
6. Ajaykumar, B., Joseph, S., **Abhilash, P.C.**, Mohan, M., Anitha, K., Thomas, A.P. *Fossil Wood: A Key to the Past*. Nowa Publishers, USA.

(F) Full Paper in Seminar Proceedings:

1. Singh, N., Jamil, S., **Abhilash, P.C.** Phyto-management of coal fly ash. *Proceedings of the Workshop on Ash Utilization for Sustainable Development*, NTPC Limited, Korba Super Thermal Power Station – Korba. 2009. p.38-45

(G) Abstracts Published/Poster Presented:

1. Bakshi, M., **Abhilash, P.C.** Applications of nanotechnology for soil remediation. “84th Annual Session of the National Academy Sciences, India and Symposium on Desert Science: Challenges and Opportunities”, organized by faculty of science, Jai Narain Vyas University, Jodhpur, India. December 4-6, 2014: p32.
2. Dubey, R.K., **Abhilash, P.C.** Effect of crop species on CO₂ efflux from soil. Abstract submitted for the “84th Annual Session of the National Academy Sciences, India and Symposium on Desert Science: Challenges and Opportunities”, organized by faculty of science, Jai Narain Vyas University, Jodhpur, India. December 4-6, 2014: p31.
3. Edrisi, S.A., **Abhilash, P.C.** Prospects and promises of biomass and biofuel production from marginal and degraded lands of India. “84th Annual Session of the National Academy Sciences, India and Symposium on Desert Science: Challenges and Opportunities”, organized by faculty of science, Jai Narain Vyas University, Jodhpur, India. December 4-6, 2014: p4
4. Dubey, R.K., **Abhilash, P.C.** Singh, H.B. Sustainable agronomic practices for reducing soil CO₂ efflux. “National Workshop on Advances in PGPR Research” organized by Department of Mycology and Plant Pathology, Institute of Agricultural Sciences. BHU, Varanasi, U.P., India from October 7-8, 2014: p69.
5. Bakshi, M., **Abhilash, P.C.** The Applications and Implications of Nanoparticles on PGPR, National Workshop on “Advances in PGPR Research”, organized by Department of Mycology and Plant Pathology, Institute of Agricultural Sciences, Banaras Hindu University, Varanasi, Oct 7-8, 2014: p106
6. Tripathi, V, **Abhilash, P.C.**, Singh, H.B. Bioremediation under changing climate. “International conference on Mitigating Climate Change with Special Reference to Developing Countries”, organized by RML National Law University Lucknow from March 28 -30, 2014: p133.
7. Dubey, R.K., **Abhilash, P.C.** Singh, H.B. Agricultural land management for mitigating the climate change. “International Conference on Mitigating Climate Change with Special Reference to Developing Countries” organized by Dr. Ram Manohar Lohiya National Law University, Lucknow, U.P., India from March 28-30, 2014: p134.
8. Edrisi, S.A., **Abhilash, P.C.** GIS based Bioenergy Potential on Marginal Land in Developing Countries. International Conference on “Mitigating Climate Change with Special Reference to Developing Countries” organized by Dr. Ram Manohar Lohiya National Law University, Lucknow, U.P. March 28-30, 2014: p100.

9. Tripathi, V, Dubey, R.K., **Abhilash, P.C.**, Singh, H.B. Current Challenges in Bioremediation of Persistent Organic Pollutants. "Graduate Seminar on Environment and Sustainable Development" organized by Institute of Environment and Sustainable Development, BHU, Varanasi, U.P., India from March 8-9, 2014: p42
10. Dubey, R.K., Tripathi, V, **Abhilash, P.C.**, Singh, H.B. New age biofertilizers for sustainable agriculture. "Graduate Seminar on Environment & Sustainable Development" organized by Institute of Environment and Sustainable Development, BHU, Varanasi, U.P., India from March 8-9, 2014: p40.
11. Bakshi, M, **Abhilash, P.C.** Nanotechnology based Applications for Enhancing Food Security, Graduate Seminar on "Environment and Sustainable Development", organized by Institute of Environment and Sustainable Development, BHU, Varanasi, March 5-6, 2014: p10.
12. Edrisi, S.A., **Abhilash, P.C.** Food & Energy for All: Sedate or Jest? Graduate Seminar on "Environment and Sustainable Development" BHU, Varanasi, March 8-9, 2014: p36.
13. Dubey, R.K., **Abhilash, P.C.**, Singh, H.B. Manipulating microenvironment and carbon dynamics for the sustainability of soil system. International Conference on "Environment Technology and Sustainable Developments: Challenges and Remedies" organized by Babasaheb Bhimrao Ambedkar University, Lucknow U.P., India, from February 21-23, 2014: p129.
14. Edrisi, S.A., **Abhilash, P.C.** Biomass & Biofuels Production from Marginal and Degraded Lands. International Conference on "Environmental Technology and Sustainable Development: Challenges & Remedies" Babasaheb Bhimrao Ambedkar University, Lucknow, February 21-23, 2014: p129-130
15. Tripathi, V, **Abhilash, P.C.**, Singh, H.B. Exploiting Plant-Microbe Partnership for the Rhizodegradation of Hexachlorocyclohexane Isomers. "National Conference on Microbes Promoting Crop Health, Productivity and Sustainability", jointly organized by NBRI-CIMAP Lucknow from February 21-23, 2014: p68.
16. Tripathi, V, **Abhilash, P.C.**, Singh, H.B. Phytofiltration: A Strategy for clean-up of contaminated water. "National Seminar on Sustainable Water Resource Management in Era of Changing Climate" organized by Institute of Environment and Sustainable Development, BHU, Varanasi, U.P., India from January 10-11, 2014: p24.
17. Dubey, R.K., **Abhilash, P.C.**, Singh, H.B. Sustainable agriculture approach for increasing crop yield with reduced water usage. National Seminar on "Sustainable Water Resource Management in Era of Changing Climate" organized by Institute of Environment and Sustainable Development, BHU, Varanasi, U.P., India from January 10-11, 2014: p24.
18. Bakshi, M, **Abhilash, P.C.** Nanotechnology based Treatment of agricultural wastewater. National Seminar on "Sustainable Water Resource Management in Era of Changing Climate", organized by Institute of Environment and Sustainable Development (IESD), BHU, Varanasi at RGSC-BHU, Barkachha, Mirzapur (U.P.) Jan 10-11, 2014: p16.
19. Edrisi, S.A., **Abhilash P.C.** Sustainable Water Treatment to Enhance Biofuel Production through Integration of Technologies. National Seminar on "Sustainable Water Resource Management in Era of Changing Climate" Rajiv Gandhi South Campus, BHU, January 10-11, 2014: p27.
20. Dubey, R.K., **Abhilash, P.C.**, Singh, H.B. Manipulating rhizospheric system for soil carbon sequestration. Zonal Meeting of Indian Phytopathological Society (MEZ) & National Conference on "Microbes Promoting Crop Health Productivity & Sustainability" organized by CSIR-NBRI and CIMAP, Lucknow, U.P., India from October 26-27, 2013: pp113-114.
21. Tripathi, V, **Abhilash, P.C.**, Singh, H.B. Exploring microbial diversity for environmental protection. "National Conference on Microbes Promoting Crop Health, Productivity and Sustainability", jointly organized by NBRI-CIMAP Lucknow from October 26-27, 2013: p67.
22. **Abhilash, P.C.***, Tripathi V, Dubey, R.K., Singh, N. Plant mediated dissipation of lindane from soil. "10th International Phytotechnologies conference" organized by International Phytotechnology Society and State University of New York College of Environment and Forestry, Syracuse, New York, USA from October 1- 4, 2013: p32.
23. **Abhilash, P.C.** Harnessing plant-microbe-pollutant interactions: Implications for bioremediation of anthropogenic pollutants. Poster presented at the International Conference "Planet under Pressure-New Knowledge towards solution" London, March 26-29, 2012.
24. **Abhilash, P.C., Singh, G.S.** Adaptive soil management: an innovative strategy for agricultural sustainability and remediation and management of contaminated and degraded lands. Poster presented at the International Conference "Planet under Pressure-New Knowledge towards solution" London, March 26-29, 2012.

25. **Abhilash, P.C.** Bioremediation in a changing climate: Prospects and perspectives. Proceedings of the 81st Annual Session and National Symposium on Sustainable Management of Biodiversity using Science & Technology, Trivandrum 2012, p1.
26. **Abhilash, P.C.** Developing non-toxic varieties of *Jatropha curcas* for sustainable biofuel production. Proceedings of the international conference on Climate Change Forest Resources and Environment, Trivandrum 2012, p56.
27. **Abhilash, P.C.** More than remediation: linking bioremediation with biomass and biofuel production. Proceedings of the National Seminar on Environmental Concerns & Sustainable Development: Issues and Challenges for India, 2012, p61.
28. **Abhilash, P.C.** Lindane as a Stockholm list of pollutant: The need of global elimination. Proceedings of the National Seminar on Environmental Concerns & Sustainable Development: Issues and Challenges for India, IESD BHU, 2012, p92.
29. **Abhilash, P.C.** Nanoparticles in the environment: benefits or risks?. Proceedings of the National Seminar on Environmental Concerns & Sustainable Development: Issues and Challenges for India, IESD BHU, 2012, p97.
30. **Abhilash, P.C.,** Patra, D.D. Remediation of persistent organic pollutants contaminated soils in a changing climate: Challenges and critical research needs. Poster presented at the Indo-Swiss collaboration in Biotechnology International Conference "Recent trends in developing bioremediation strategies for HCH & other chlorinated contaminants, University of Delhi, February 9-11, 2011.
31. Jamil, S., **Abhilash, P.C.,** Singh, A., Singh, V., Srivastava, P., Deeba, F., Jafri, A., Singh, AP., Singh, N. Identification of suitable phytoextractors and phytostabilizers for fly ash. Proceedings of the Fourth International Conference on Plants & Environmental Pollution, Lucknow, 2010, p 140.
32. Singh, V., Jamil, S., **Abhilash, P.C.,** Singh, N. Persistent organic pollutants (POPs): status in India. Proceedings of the Fourth International Conference on Plants & Environmental Pollution, Lucknow, 2010, p 194.

Invited Talks/Lectures Given:

1. **"Dealing with Referee's Comments"**. National Workshop on Scientific/Research Paper Writing; National Academy of Science India, Allahabad & Dept. of Chemistry, Savitribai Phule Pune University, Pune December 16-17, 2014. (Invited).
2. **"H-index and Other Indices"**. National Workshop on Scientific/Research Paper Writing; National Academy of Science India, Allahabad & Dept. of Chemistry, Savitribai Phule Pune University, Pune December 16-17, 2014. (Invited).
3. **"Pesticide use and application: an Indian Scenario"**. Lecture delivered during the 5-day residential program on Measurement of Persistent Organic Pollutants in Environmental Samples (Sponsored by Central Pollution Control Board) at CSIR-National Geophysical Research Institute, Hyderabad, November 24, 2014 (Invited).
4. **"A safe operating space for humanity"**. Lecture delivered at Agra Sen Kanya PG College, Varanasi as part of Science Popularization program of Uttar Pradesh Academy of Science (UPAS), March 3, 2014. (Invited).
5. **"Plant mediated dissipation of lindane"**. 10th Phytotechnology Conference; State University of New York, Syracuse, USA, October 1-4, 2013
6. **"Microbial assisted phytoremediation of chlorinated pesticides in a warming climate: Challenges and perspectives"**. International Conference on Pesticide Behaviour in Air, Water & Soil; University of York, UK, September 2-4, 2013.
7. **"Bioremediation in a changing climate: The way forward"**. International Conference on Anthropogenic Impact on Environment & Bioremediation; Sri Venkateshwara University, Tirupathi, November 26-28, 2012. (Plenary).
8. **"Revising the Manuscript for Publication: What to Do and How to Do"**. National Workshop on Scientific/Research Paper Writing; National Academy of Science India, Allahabad, November 10, 2012. (Invited).
9. **"Use of Microbial Resources for Enhancing Agricultural Production and Reducing Trace Gases Emission from Agro-ecosystem"**. LAKE 2012: National Conference on Conservation and Management of Wetland Ecosystems; SES, Mahatma Gandhi University, Kottayam, November 8, 2012. (Invited).
10. **"Infochemicals: The transmediators of plant-microbe interactions"**, Faculty of Science, VBS Purvanchal University, Jaunpur, August 13, 2012. (Invited).
11. **"Bioremediation of anthropogenic pollutants in a changing climate"**. National Science Day at Central Institute of Medicinal & Aromatic Plants (CSIR-CIMAP), Lucknow, February 28, 2011.

12. **“Green technologies for the remediation of contaminated soils, restoration of wastelands for biofuel/biomass production & soil carbon sequestration”**. Centre for Sustainable Technologies (CST), Indian Institute of Science (IISc), Bangalore, October 22, 2010.

Seminars/Symposium/Lectures Attended:

1. International Conference on **“Environmental Technology & Sustainable Development: Challenges & Remedies”**. Dept. of Environmental Science, Babasaheb Bhimrao Ambedkar University, Lucknow, February 21-23, 2014.
2. **“10th International Phytotechnology Conference”**. State University of New York, Syracuse, USA, October 1-4, 2013
3. International Conference on **“Pesticide Behaviour in Air, Water & Soil” (York Pesticide 2013)**; University of York, UK, September 2-4, 2013.
4. International Conference on **“Planet Under Pressure: New Knowledge Towards Solution”** Organized by the Global Change Programs of the International Council for Science (ICSU), Excel London, March 26-29, 2012.
5. National Seminar on **“Environmental Concerns and Sustainable Development: Issues and Challenges for India”** organized by Institute of Environment & Sustainable Development (IESD), Banaras Hindu University, Varanasi, March 2-4, 2012.
6. Orientation Workshop on **“National Aquatic Animal-Ganges River Dolphin”** organized by Institute of Environment & Sustainable Development (IESD), Banaras Hindu University, Varanasi & CEE, Lucknow, July 28-30, 2011.
7. National Workshop on **“Role of Higher Education in Disaster Management – Issues and Challenges”** organized by Institute of Environment & Sustainable Development, Banaras Hindu University, Varanasi, April 29-30, 2011.
8. Indo-Swiss Collaborative Workshop on **“Recent Trends in Bioremediation of HCH & other Chlorinated Compounds”** organized by Department of Zoology, University of Delhi, February 9-11, 2011.
9. Fourth International Conference on **“Plants & Environmental Pollution”** organized by International Society of Environmental Botanists & National Botanical Research Institute, Lucknow, December 8-11, 2010.
10. 80th annual session of National Academy of Science, India and symposium on **“Climate Change-Research Awareness and Capacity Building”** organized by NASI, India & Jaipur National University, Jaipur, December 2-4, 2010.
11. Second **“Jeremy Grantham Lecture on Climate Change”** by Professor Lord Nicholas Stern, London School of Economics, Cambridge, UK organized by Divecha Centre for Climate Change, IISc Bangalore & LSE India Observatory at Indian Institute of Science, Bangalore, October 22, 2010
12. International Workshop on **“Climate Change & its Impact on Flora in the South Asia Region”**, organized by National Botanical Research Institute & South Asia Co-operative Environment Programme (SACEP), Lucknow, March 9-12, 2008.
13. Third Meeting of the **“Multi Stakeholders Group on Management of Lindane Contamination in Chinhat area of Lucknow”** organized by CEE and UP Directorate of Environment, Gomti Nagar, Lucknow, June 9, 2008.
14. **“Evaluation Workshop of State/UT ENVIS Centres”** organized by MoEF, Govt. of India, Clarks Hotel, Lucknow, September 19-20, 2007.
15. Second Meeting of the **“Multi Stakeholders Group on Management of Lindane Contamination in Chinhat area of Lucknow”**, organized by CEE and UP Directorate of Environment, Gomti Nagar, Lucknow, September 6, 2007.
16. First Meeting of the **“Multi Stakeholders Group on Management of Lindane Contamination in Chinhat area of Lucknow”**, organized by CEE and UP Directorate of Environment, Gomti Nagar, Lucknow, June 26, 2007.
17. Technical Seminar on **“Chromatographic Analysis for Food & Environmental Quality”** organized by WATERS, Hotel Clarks Avadh, Lucknow, September 1, 2006.
18. Technical Seminar on **“Latest in Water & Food Quality Monitoring”** organized by Thermo Electron Cooperation, USA, Hotel Clarks Avadh, Lucknow, May 2, 2006.
19. Third International Conference on **“Plants and Environmental Pollution”** organized by International Society of Environmental Botanists and NBRI, Lucknow, November 28- December 2, 2005.
20. National Seminar on **“Nano-biotechnology -The Road Ahead”** organized by National Botanical Research Institute & Amity University, Lucknow, November 17- 19, 2005.

Training/Workshops/Refresher Course Attended (Minimum duration of one week):

1. 65th Orientation Course, UGC Academic Staff College BHU, October 19-September 15, 2013.

2. One week DST sponsored training workshop on 'Green and Sustainable Technologies' organised by TERI, New Delhi, February 26-March 2, 2013.
3. Fifth Refresher Course in Environmental Studies, UGC Academic Staff College BHU, August 14- Sept 3, 2012.
4. One week advanced training workshop on "Application of crop simulation model and decision support system in yield forecasting" organized by Institute of Environment & Sustainable Development, BHU, June 25-30, 2012.
5. Five day workshop on "Alternative Sustainable Technologies" organized by UGC Networking Centre, Department of Chemical Engineering, Institute of Chemical Technology (ICT), Mumbai, March 14-18, 2012.
6. Fourth Technology Led Entrepreneurship Training Program of CSIR conducted by faculties of Indian Institute of Management, Bangalore (IIM-B) at Central Leather Research Institute (CSIR), Chennai. February 12th to March 12th 2007.

References:

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